

Serial No. 09/738,374  
June 13, 2003  
Page 6

### REMARKS

Claims 1-4 and 6-19 are pending in this application.

The Examiner objected to claim 8 because the words were allegedly too closely spaced. Applicants include in this response a copy of claims 1-4 and 6-19 which includes correct spacing. Accordingly, Applicants respectfully request reconsideration and withdrawal of this objection.

Applicants appreciate the Examiner's indication that claims 6-9 would be allowable if rewritten in independent form including all of the features of the base claim and any intervening claims, and that claims 11, 13, 16 and 19 are allowed.

Claims 1-4, 10, 12, 14, 15, 17 and 18 were rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Avanic et al. (U.S. 5,650,755) in view of Morino et al. (U.S. 5,661,441). This rejection is respectfully traversed.

Claim 1 recites:

"A piezoelectric oscillator unit comprising:  
**a circuit substrate including a cavity provided therein and a wall provided around the cavity, the wall having a top surface with electrodes disposed thereon, the circuit substrate having an oscillatory circuit mounted in the cavity thereof;**

**a vibrator package overlaid on said circuit substrate, said vibrator package housing a piezoelectric member therein and said vibrator package having electrodes provided on the bottom surface thereof which are bonded to said electrodes provided on the top surface of the wall of said circuit substrate; and**

**an adhesive arranged between the top surface of said wall of the circuit substrate and the bottom surface of said vibrator package to bond said circuit substrate and said vibrator package together.**"  
(Emphasis added)

Claim 10 has been amended to recite:

"A piezoelectric oscillator unit comprising:  
**a circuit substrate having an oscillatory circuit mounted thereon;**

**a vibrator package overlaid on said circuit substrate, said vibrator package having a top surface and a bottom surface and housing a piezoelectric member therein and said vibrator package having electrodes provided on the bottom surface thereof which are bonded to electrodes provided on the top surface of said circuit substrate;**

Serial No. 09/738,374

June 13, 2003

Page 7

a shielding case covering said vibrator package so that said shielding case contains said vibrator package; and  
**an adhesive arranged between the top surface of said vibrator package and said shielding case to adhere said shielding case to said vibrator package.**" (Emphasis added)

The Examiner alleged that Avanic et al. teaches a VCO resonator package 310 with circuit substrate 302 and connections to the substrate being inherent, and a shield 314 bonded to the top of the resonator package 310, and acknowledged that Avanic et al. fails to teach or suggest a center located cavity for the resonator, a crystal type resonator and the use of solder cream. The Examiner further alleged that Morino et al. teaches a cavity with walls to receive a resonator package 1, the use of solder cream 15, and that a crystal resonator is conventional. Thus, the Examiner concluded that it would have been obvious "to have realized that the stability of Avanic et al. vibrator package is due to the soldering of the package to the shield and that any conventional adhesive (epoxy or cream solder) would be within the level of skill for one of ordinary skill in the art. The type of resonator being simply a matter of design consideration. Securing the package being the main concern. The cavity also lending to the secure placement on the substrate." Applicants respectfully disagree.

In contrast to the present claimed invention and the Examiner's allegations, Morino et al. teaches that the bottom 9 of the dielectric resonator 1 is soldered to the metal plate 6 in the hole formed in the substrate 2 using cream solder 15, NOT that the cream solder 15 is "arranged between the top surface of said wall of the circuit substrate and the bottom surface of said vibrator package to bond said circuit substrate and said vibrator package together" (emphasis added) or that the cream solder is "arranged between the top surface of said vibrator package and said shielding case to adhere said shielding case to said vibrator package" (emphasis added) as recited in claims 1 and 10 of the present application, respectively.

In addition, neither Avanic et al. nor Morino et al. teaches or suggest "a circuit substrate including a cavity provided therein and a wall provided around the cavity, the wall having a top surface with electrodes disposed thereon" and a "vibrator package having electrodes provided on the bottom surface thereof which are bonded to said

Serial No. 09/738,374

June 13, 2003

Page 8

electrodes provided on the top surface of the wall of said circuit substrate" as recited in the claim 1. In fact, neither Avanic et al. nor Morino et al. teach or suggest anything at all about the electrodes on a circuit substrate and a vibrator package.

Furthermore, Morino et al. fails to teach or suggest any oscillatory circuit, and certainly fails to teach or suggest "an oscillatory circuit mounted in the cavity thereof" or "a circuit substrate having an oscillatory circuit mounted thereon" as recited in claims 1 and 10 of the present application, respectively.

Accordingly, Applicants respectfully submit that Avanic et al. and Morino et al., applied alone or in combination, fail to teach or suggest the unique combination and arrangement of elements recited in claims 1 and 10 of the present application.

In view of the foregoing amendments and remarks, Applicants respectfully submit that claims 1, 10, 11 and 19 are allowable. Claims 2, 3, 5-9 and 12-18 depend upon claims 1, 10 and 11, and are therefore allowable for at least the reasons that claims 1, 10 and 11 are allowable.

In view of the foregoing Remarks, Applicants respectfully submit that this application is in condition for allowance. Favorable consideration and prompt allowance are respectfully solicited.

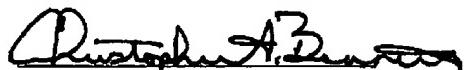
To the extent necessary, Applicants petition the Commissioner for a two-month extension of time, extending to June 13, 2003, the period for response to the Office Action dated January 13, 2003.

Serial No. 09/738,374  
June 13, 2003  
Page 9

The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Date: June 13, 2003

Respectfully submitted,



Attorneys for Applicant

Joseph R. Keating  
Registration No. 37,368

Christopher A. Bennett  
Registration No. 46,710

KEATING & BENNETT LLP  
10400 Eaton Place, Suite 312  
Fairfax, VA 22030  
Telephone: (703) 385-5200

FAX RECEIVED  
JUN 13 2003  
TECHNOLOGY CENTER 2800